Practitioner's Docket No. _2-591.5_   **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Application No.: 09 /774,538   Group No.: 3623
Filed: Jan. 31, 2001   Examiner: Peter H. Choi
For: System for Managing   Reexamination control No.:
     Risk

Mail Stop Appeal Brief—Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION OR EX PARTE REEXAMINATION—
37 C.F.R. § 41.37)

> NOTE: The phrase "the date on which" an "appeal was taken" in 35 U.S.C. 154(b)(1)(A)(ii) (which provides an adjustment of patent term if there is a delay on the part of the Office to respond within 4 months after an "appeal was taken") means the date on which an appeal brief under § 1.192 (and not a notice of appeal) was filed. Compliance with § 41.37 requires that: 1. the appeal brief fee (§ 41.20(b)(2)) be paid (§ 41.37(a)(2)); and 2. the appeal brief complies with §§ 41.73(c)(i)-(x). See Notice of September 18, 2000, 65 Fed. Reg. 56366, 56385-56387 (Comment 38).

1. Transmitted herewith is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on ___March 2, 2007___

> NOTE: Appellant must file a brief under this section within two months from the date of filing the notice of appeal under § 41.31. 37 CFR 41.(a)(1). The brief is no longer required in triplicate. The former alternative time for filing a brief (within the time allowed for reply to the action from which the appeal was taken)

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*
*(When using Express Mail, the Express Mail label number is **mandatory**;
Express Mail certification is optional.)*

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

☒ deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

37 C.F.R. § 1.8(a)	**37 C.F.R. § 1.10 ***
☐ with sufficient postage as first class mail.	☐ as "Express Mail Post Office to Addressee"
	Mailing Label No. _____ **(mandatory)**

TRANSMISSION

☐ facsimile transmitted to the Patent and Trademark Office, (571) 273-8300.

_____
Signature

Date: ___April 30, 2007___   Sue Muro

_____
(type or print name of person certifying)

* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

has been removed. Appellant must file within two months from the notice of appeal. See Notice of August 12, 2004, 69 FR 49960, 49962.

2. STATUS OF APPLICANT

This application is on behalf of

☐ other than a small entity.

☒ a small entity.

A statement:

☐ is attached.

☒ was already filed.

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:

☒ small entity $250.00

☐ other than a small entity $500.00

Appeal Brief fee due $ __250.00__

4. EXTENSION OF TERM

NOTE: 37 C.F.R. § 1.704(b) ". . .an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office making any rejection, objection, argument, or other request, measuring such three-month period from the date the notice or action was mailed or given to the applicant, in which case the period of adjustment set forth in § 1.703 shall be reduced by the number of days, if any, beginning on the day after the date that is three months after the date of mailing or transmission of the Office communication notifying the applicant of the rejection, objection, argument, or other request and ending on the date the reply was filed. The period, or shortened statutory period, for reply that is set in the Office action or notice has no effect on the three-month period set forth in this paragraph."

NOTE: The time periods set forth in 37 C.F.R. § 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 C.F.R. § 1.191(d). See also Notice of November 5, 1985 (1060 O.G. 27).

NOTE: As the two-month period set in § 1.192(a) for filing an appeal brief is not subject to the six-month maximum period specified in 35 U.S.C. § 133, the period for filing an appeal brief may be extended up to seven months. 62 Fed. Reg. 53,131, at 53,156; 1203 O.G. 63, at 84 (Oct. 10, 1997).

☐ The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

WARNING: *The provisions of 37 CFR § 1.136 do not apply in an ex parte reexamination. Any requests for extension must be made pursuant to 37 CFR 1.550(c).*

(complete (a) or (b), as applicable)

(a) ☐ Applicant petitions for an extension of time under 37 C.F.R. § 1.136 (fees: 37 C.F.R. § 1.17(a)(1)-(5)) for the total number of months checked below:

Extension (months)	Fee for other than small entity	Fee for small entity
☐ one month	$ 120.00	$ 60.00
☐ two months	$ 450.00	$ 225.00
☐ three months	$ 1,020.00	$ 510.00
☐ four months	$ 1,590.00	$ 795.00
☐ five months	$ 2,160.00	$1,080.00

Fee: $_____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

☐ An extension for _____ months has already been secured, and the fee paid therefor of $ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request $ _____

or

(b) ☐ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

5. TOTAL FEE DUE

The total fee due is:

      Appeal brief fee $ ___250.00___

      Extension fee (if any) $ _____

TOTAL FEE DUE $ _____

6. FEE PAYMENT

☒ Attached is a ☒ check ☐ money order in the amount of $ _250.00_

☐ Authorization is hereby made to charge the amount of $ _____

    ☐ to Deposit Account No. _____

    ☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

*WARNING: Credit card information should **not** be included on this form as it may become public.*

☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

☐ A duplicate of this paper is attached.

7. FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to change the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

☐ If any additional extension and/or fee is required,

AND/OR

☒ If any additional fee for claims is required, charge:

    ☒ Deposit Account No. _23-0442_

    ☐ Credit card as shown on the attached credit card information authorization form PTO-2038.

*WARNING: Credit card information should **not** be included on this form as it may become public.*

Date: April 30, 2007

Reg. No.: 41,266

Customer No.: 004955

_____

SIGNATURE OF PRACTITIONER

James A. Retter
_____
(type or print name of practitioner)

P.O. Box 224
_____
P.O. Address

Monroe, CT 06468
_____

(Transmittal of Appeal Brief **[9-6.1]**—page 4 of 5)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First named inventor: Ian E. Abrahams

Serial No.: 09/774,538

Filed: Jan. 31, 2001

Title: System for Managing Risk

Group Art Unit: 3623

Examiner: Choi, Peter H.

MAIL STOP APPEAL BRIEFS--PATENTS
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

BRIEF FOR APPELLANTS

Sir:

This is a brief for an appeal from an Office Action mailed November 3, 2006, made final, to which applicant filed a request for reconsideration and in response received an Advisory Action, mailed February 5, 2007, maintaining the rejections.

This brief follows a timely filed Notice of Appeal.

For all of the reasons given below, it is the belief of the undersigned that the claims of the application do distinguish the invention from the art relied on by the Examiner. Nevertheless, the undersigned is always willing to discuss possible amendments to any claims to clarify or resolve any issues related to claim interpretation that may remain after the Examiner has reviewed applicant's brief. The Examiner is strongly encouraged to call the undersigned to discuss making any such amendments.

Table of Contents

I. THE REAL PARTY IN INTEREST

The real party in interest is CorProfit System Pty. Ltd., having a principal place of business at Suite 3, Level 1, Building 1, 20 Bridge St., Pymble, Sydney, NSW 2073, Australia. Tel +61 1300 55RISK (7475); Fax +61 2 9440 7408.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-20 are pending and all stand rejected. All claims are appealed.

IV. STATUS OF AMENDMENTS

No amendments have been filed since the mailing of the final Office action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

This section provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawings by reference characters. For each independent claim involved in the appeal and for each dependent claim argued separately under the provisions of paragraph (c)(1)(vii) of this section, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, is identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

Claim 1

Claim 1 is directed to the use of quantitative risk information obtained in a particular project for updating a knowledge base of generic risk information, i.e. risk information not having to do with a particular project but instead representing accumulated experience over many different projects (after some years of use of the invention). (Claim 10, depending from claim 1, is directed to using the generic risk information as a starting point for a new project.)

Claim 1 recites a system for use in managing risk, comprising a knowledge base (11) (Figs. 1A and 1B and 7), a data store of profiles (12) (Figs. 1A and 1B and 7), and a risk processor 72 (Fig. 7).

As explained in the application beginning at page 9, line 25, the knowledge base (11) recited in claim 1 holds so-celled generic risk records--i.e. records having risk values that are a result of updating by the risk processor so as to reflect an average of risks in actual projects, and so are risk values in the abstract, as opposed to a risk in any actual project. Each generic risk record includes a plurality of fields at least some of which have subjective or quantitative values, with the subjective values synchronized to numerical values. Thus, e.g. a generic risk record might indicate it is a record for risk of cost increases for fuel, and might indicate a risk of "moderate." The system includes information that translates "moderate" to a numerical value so that it can be arithmetically manipulated, for example averaged with a quantitative field of another risk record.

More particularly, the knowledge base (11) is recited as a knowledge base for maintaining a generic risk record (see the "generic risk 1" in Figure 1A, or the tree structure for the knowledge base in Figure 1B, having risk records "Risk-1" and "Risk-2") including a plurality of fields (see the fields of the "generic risk 1" of Figure 1A or the fields of "Risk-2" of Figure

1B, and see the description at page 10, line 27, to page 12, line 20) at least some of which have subjective or quantitative values for risk (see page 12, lines 21-28), with the subjective values synchronized to numerical values (see page 12, lines 21-28), and at least some of which have been determined as an average of corresponding subjective or quantitative risk values in completed projects or processes (page 21, lines 21-24).

As explained in the application beginning at page 9, line 25, the data store of profiles (12) recited in claim 1 holds profile risk records each associated with a particular profile--i.e. with a given (actual) project (see page 8, line 29)--and each including the *same plurality of fields as the generic risk record* (see page 2, line 20, and see also that the "Risk-2" record of the contexts data store 12 in Figure 1B has the same structure as the "Risk-2" record of the knowledge base 11 of Figure 1B), which of course facilitates the machine updating (i.e. by the risk processor) of the generic risk records on the one hand, and the use of the generic risk records as templates on the other hand. The profile risk records are for use in providing a risk assessment in the particular profile/ actual project. It is helpful, in understanding the invention as in claim 1, to appreciate that the profile risk record is, in the context of claim 1, for a project that has already been completed, and so the quantitative values of the profile risk records for the project are based on actual experience, although only for one particular project. At page 21, beginning line 14, the application explains:

> In the particular example of the use of the invention illustrated in Fig. 2, in the next step the user extracts risks (i.e. risk records including a risk, cause, consequence and control) from the knowledge base of generic risk records. In the preferred embodiment, as shown in Fig. 1A and 1B, the knowledge base organizes risks according to categories to aid in a user locating existing risks that the user might want to include in a new risk profile. As will be explained in more detail below, the generic risks in the knowledge base have values for measuring fields (risk inherent likelihood, inherent cost of consequence and control effectiveness)

that are averages of the values used in profiles of
various users over time.

The risk processor (72) recited in claim 1 updates subjective
or quantitative values of generic risk records based on
corresponding field values in the profile risk records in the data
store of profiles. The updating is performed by averaging into
the at least one value of the generic risk record the
corresponding field value in the profile risk record, an averaging
that is, for example, a simple arithmetic averaging. See for
example page 14, line 7. See also page 21, beginning line 27,
explaining:

> … the generic risks in the knowledge base have
> values for measuring fields (risk inherent
> likelihood, inherent cost of consequence and
> control effectiveness) that are averages of the
> values used in profiles of various users over time.

The result of the updating by the risk processor is that the
subjective or quantitative values of the generic risk records are
refined over time based on values of the corresponding fields of
the profile risk records, and thus, the knowledge base *learns over
time*, i.e. at least some of the subjective or quantitative values
of the generic risk record are refined over time based on values
of the corresponding fields of the profile risk record for the
particular project or process.

Whereas claim 1 is directed to improving the knowledge base,
claim 10 is directed to using the knowledge base in a particular
project. Claim 10 recites that the risk processor uses the
generic risk records of the knowledge base (having quantitative
risk values reflecting experience gained over many projects), to
provide initial values for profile risk records, i.e. to provide
values for risk in an actual project. As explained also at page
21, but starting at line 31:

> A user can extract a risk from the knowledge base
> and either use these learned values or override the
> values with values of the user's own choosing.
> Typically only some of the risks appropriate to a
> new profile being created by a user will be
> extracted by the user from the knowledge base. The

-6-

>   user will in addition create new risks from
>   scratch, as in the next step in the particular use
>   of the invention illustrated in Fig. 2.

Thus the generic risk records can be said to serve as templates,
or starting points for risk assessment for an actual project.

Claim 11

Claim 11 recites a method that is a method of operation of a
system as in claim 1. Claim 11 includes a step of maintaining in
a knowledge base a generic risk record including a plurality of
fields at least some of which have subjective or quantitative
values for risk, with the subjective values synchronized to
numerical values, and at least some of which have been determined
as an average of corresponding subjective or quantitative risk
values in completed projects or processes. This step is
illustrated in Figure 7, described at page 5, line 22 as "a block
diagram/ flow diagram of elements of the invention involved in
updating the knowledge base [shown in Figure 1A, etc.], showing
how the knowledge base learns over time." The data flow "updated
or new generic risk records ..." in Figure 7 illustrates this step
of maintaining the knowledge base. See the paragraph beginning at
page 26, line 28, and in particular see page 27, line 8.

The method also includes a step of maintaining in a data
store of profiles a profile risk record associated with a
particular profile for a particular project or process, and
including the same plurality of fields as the generic risk record,
the profile risk record for use in providing a risk assessment in
the associated profile for the particular project or process.
Figure 1A shows adding a new risk record to a profile (data flow
labeled "new risk records to add to a profile"). Figure 5, in the
first step of the flow diagram illustrated there, shows updating
(profile) risk values based on values for the same or a similar
risk in the knowledge base. For the "same plurality of fields"
limitation, see the application at see page 2, line 20, and see
also that the "Risk-2" record of the contexts data store 12 in

Figure 1B has the same structure as the "Risk-2" record of the knowledge base 11 of Figure 1B.

Finally, the method includes a step of updating at least one of the subjective or quantitative values of the generic risk record based on a corresponding field value in the profile risk record in the data store of profiles, by averaging into the at least one value of the generic risk record the corresponding field value in the profile risk record. See again Figure 7, noting that the risk processor 72 illustrated there requests risk records from the contexts data store 12 (holding profiles of risk records), obtains existing generic risk records from the knowledge base, and provides updated generic risk records.[1] See also the description at page 14, line 7. See also page 21, beginning line 27.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are to be reviewed:

the rejections of claims 1-20 under 35 USC section 101;

the rejections of claims 1-20 under 35 USC section 112, second paragraph;

the rejection of claims 1-2 and 4, 9-12, 14 and 19-20 under 35 USC §103 as being unpatentable over "Risk Assessment in Construction Schedules," by B. Mulholland and H. Christian, hereinafter Mulholland; and

the rejection of claims 3, 5-8, 13 and 15-18 under 35 USC §103 as being unpatentable over Mulholland as applied to claims 1 and 11, and further in view of Summerrell et al. (US Pat. No. 5,937,387).

---

[1] Applicant's attorney notices also that in Figure 7 there is an obvious mistake: the data flow "request for risk records + specified date(s) (one for each measuring field)" issuing from the contexts data store and terminating at the risk processor 72 should obviously be labeled instead "*requested* risk records + specified date(s) (one for each measuring field)" as that data flow is clearly the result of the request *from* the risk processor *to* the contexts data store, since the contexts data is the repository of the (profile) risk records.

VII. ARGUMENT

Claim rejections under 35 USC §101

At page 6 of the final Office action, the Examiner rejects claims 1-20 under 35 USC 101, for being directed to non-statutory subject matter (even though when the US PTO acting as IPEA examined the corresponding international application, PCT/AU02/00094, filed 31 Jan. 2002, the international examiner found (years ago) that all the claims there, which include a claim substantially the same as claim 1, meet all the requirements for patentability).

In the final Office action, the Examiner states that to be useful, as required by 35 USC 101, a claimed invention must yield a result that is "specific, substantial, and credible," and asserts that:

> … the claimed invention does not have a specific or substantial result, nor is there a positive citation of use for the result. Risk records are maintained and updated, but this result is intangible and lacks usefulness.

In this regard, at page 7, the Examiner states that:

> If … the risk records were somehow used in a real-world application such as managing projects (based on the corresponding identified risk) or generating new generic risk templates (used to provide risk analysis of future projects), then the claimed invention would yield a real world, i.e., tangible, result.

As explained above, claim 1 quite exactly does claim the generating of new generic risk templates in that the updated values of the generic risk record are different values and therefore new values, and therefore amount to a new generic risk template. (And as recited in claim 10, these generic risk templates are then used for future projects.) Claim 11, the only other independent claim, likewise requires generating new generic risk templates so that the updated values of the generic risk record are different values and therefore new values, and

therefore amount to a new generic risk template. Therefore, based on the criterion given by the Examiner in the previous Office action, the claimed invention is useful.

Accordingly, applicant respectfully submits that all rejections under 35 USC §101 are error.

Claim rejections under 35 USC §112

Claims 1-20 are rejected under 35 USC section 112 because of supposed indefiniteness in claims 1 and 11, the only independent claims of the application. In particular, first the Examiner asserts that in the "and at least some of which" recitation at lines 6-9 it is unclear what is referred to by "which." Applicant respectfully points out that the claim recites:

> a knowledge base, for maintaining a generic risk
> record including a plurality of fields *at least*
> *some of which* have subjective or quantitative
> values for risk, with the subjective values
> synchronized to numerical values, *and at least some*
> *of which* have been determined as an average of
> corresponding subjective or quantitative risk
> values in completed projects or processes;
> [Emphasis added]

The Examiner is evidently sure of what is referred to by the first "some of which" recitation. Applicant respectfully submits that the second "which" obviously refers to the same antecedent, the fields of the generic risk record, in view of the recited "and" conjunction.

Next the Examiner asserts that "an average of corresponding subjective or quantitative risk values" recited in claims 1 and 11 is unclear. The subject language is, in full context (as above):

> a knowledge base, for maintaining a generic risk
> record including a plurality of fields at least
> some of which have subjective or quantitative
> values for risk, with the subjective values
> synchronized to numerical values, and at least some
> of which have been *determined as an average of*
> *corresponding subjective or quantitative risk*
> *values in completed projects or processes;*
> [Emphasis added]

-10-

Applicant respectfully submits that, as supposed by the Examiner, the subject language clearly means that the generic risk record includes at least one field for a risk value holding a value that is an average of risk values for the same risk in completed projects or processes. The risk values in the completed projects/processes are recited as "corresponding" to make clear that they are values for the same risk as that of the generic risk record. For example, the generic risk record might have a field for the risk that the cost of labor will not increase for at least two months. The risks in the completed projects or processes that are averaged together to come up with the value in the generic risk record would all be for that same risk, and so would all be "corresponding."

Accordingly, applicant respectfully submits that all rejections under 35 USC §112, second paragraph, are error.

Claim rejections under 35 USC §103

The Examiner rejects claims 1-2, 4, 9-12, 14 and 19-20 under 35 USC §103 as being unpatentable over Mulholland.

As explained at p. 10, col. 2, first full paragraph, the subject of Mulholland is *risk assessment*. See p. 10, col. 2, first full paragraph, where Mulholland explains:

> Classic risk analysis is undertaken in the following three iterative phases: (1) Risk identification; (2) risk measurement; and (3) risk management (Diekmann et al. 1988). … *The subject of this paper, risk assessment, is involved with the first two phases of risk analysis*. Risk identification involves determining which variable are (*sic*) likely to affect the schedule. Risk measurement involves evaluating and quantifying the probability of the occurrence of a risk and the effects on the schedule (Fig. 2).

At page 11, col. 1, ll. 8-12, Mulholland describes as part of risk assessment modeling the effects of uncertainty on a project schedule using three steps (recursively):

(1) Identify schedule risks; (2) evaluate their
effects and the probability of occurrence; and (3)
within the proposed project schedule framework,
model the risks and their effects to obtain the
project's schedule risk profile.

For use in the first step, Mulholland discloses a hypercard
information system used for *risk identification*, and a separate
spreadsheet of use in quantifying the identified risks, i.e.
evaluating project uncertainty. Page 8, right hand column, first
paragraph of Mulholland explains:

... The system [of Mulholland] includes the following
three key features:
1. A *hypercard* information system for schedule *risk
identification*
2. A *spreadsheet* to describe and evaluate *project
uncertainty*
3. Direct pictorial information to assist the
decision makers in selected a realistic yet
acceptable project completion time.
[Emphasis added.]

The hypercard knowledge base of Fig. 5, referred to as a
hypercard information system for risk identification in the text
(page 12, col. 2, first heading), is described (at page 12, col.
2, after the heading) as follows:

... The system is composed of schedule risk
information (facts, data, and heuristics) linked to
together using hypertext tools. The information
can be in the form of text, graphics, or pictures.
Thereby, typical project risks can be documented
and made available to assist new project teams in
becoming aware of general risk information and the
possible inferences for a specific project.

The hypercard system of Mulholland is thus in effect simply an
electronic form of a notebook of past experiences. The links are
explained at col. 2, third full paragraph, to be "divided into two
types: organizational and navigational," with "organizational
links connect[ing] the structure of the system."

The (Excel) spreadsheet is explained at page 12, col. 2, last
paragraph, as being for use in a sensitivity analysis. In a
sensitivity analysis in general and also according to Mulholland,
one "uncertain element" is varied to allow examining the effect of

its variation on the total project performance time. These variations are *hypothetical*, not actual, and the outcome depends on the assumptions of a model for risk for the project.

At page 14, col. 2, lines 10-13, Mulholland provides a statement that a general objective or goal of a risk assessment system is to enable the transfer of project experience and institutional knowledge to new projects.

Thus, Mulholland teaches a risk identification phase and also a risk measurement phase of risk management, and Mulholland teaches making use of past experience for risk identification, but does *not* teach making use of past risk management projects to update a body of risk information *including quantitative risk information*. More specifically in respect to the invention as in claims 1 and 11, applicant respectfully submits that Mulholland does not teach:

two data stores, both for holding quantitative or subjective values of risk; *nor*

the updating of a record in one of the data stores based on a record in the other (i.e. the updating of a generic risk record based on a profile risk record); *nor*

an *averaging* process as part of the updating process;

all of which are required by claim 1 and also claim 11, the only two independent claims pending.

Only one data store

At the heart of the invention as claimed is two data stores, "*a knowledge base*" (for holding the generic risk records, i.e. for storing records, i.e. serving as a first data store) and a "*data store of profiles*" (for holding the profile/ actual project risk records). The Examiner asserts in the final Office action that only *one* data store is claimed. But the knowledge base and the

data store of profiles make up *two data stores*.   For this reason
alone, the rejections are error.

In the Advisory Action, the Examiner appears to concede that
two data stores are recited, but asserts for the first time that
in Mulholland,

> … the HyperCard knowledge base is a knowledge base for
> maintaining risk records, and the Hyper-Card risk factor
> identification module, which contains information
> acquired from many experts and previous construction
> projects and then uses statistical techniques embedded
> in an Excel spreadsheet … is another data store that
> holds an average of data … .

Applicant respectfully submits that as repeatedly explained,
the *risk* factor *identification* module is of use in *identifying*
risks, not quantifying the risks, and there is therefore no
averaging of risk values there, but only an indication of
different kinds of risk that might be present in a project.   The
teaching in Mulholland of using an Excel spreadsheet *has nothing*
whatsoever to do with the teaching in Mulholland of risk
identification.   The spreadsheet is disclosed as useful in
quantifying risk, by performing "what if" scenarios.   There is no
teaching or suggestion of using the spreadsheet to average actual
risk values, i.e. what are recited as profile risk values.

Further, and most telling, the Hypercard knowledge base is
the data store of the risk factor identification module, i.e. the
risk factor identification module uses (only) the Hypercard
knowledge base, and so *in Mulholland*, even under the
interpretation asserted by the Examiner, there is *still only one*
data store.

No updating of one data store based on another

Since for the reasons given Mulholland teaches only one data
store, Mulholland cannot be said to teach updating a record in one
data store based on records in another, as required by claims 1
and 11 (by virtue of the recitation of updating at least one of

the subjective or quantitative values of a generic risk record based on a corresponding field value in a profile risk record in the data store of profiles).

The Examiner asserts that the updating is disclosed in Mulholland because (see the Final Office action at page 10, line 5 of paragraph (c) (bold text):

> an estimate of the overall project duration must be produced based on uncertain data; modeling the effects on uncertainty on the project schedule by use of three recursive steps, (1) Identify schedule risks, (2) evaluate their effects and the probability of occurrence, and (3) within the proposed project schedule framework, model the risk and their effects to obtain the project's schedule risk profile; The HyperCard system can provide the basis for risk identification by presenting most known schedule risks. The database provided by the HyperCard system should act as a stimulus for follow-up brainstorming sessions with the key members of thee project team. The output from the review of the HyperCard database and the brainstorming process should provide a comprehensive list of potential schedule risks, which then can be rewritten and reordered in the relevant risks for each dimension of schedule uncertainty [page 11, Column 1, lines 10-17, 32-40].

To the extent that applicant's attorney understands this statement, it appears to be merely a description of classic risk analysis, but has no relevance as disclosing "updating at least one of the subjective or quantitative values of a generic risk record based on a corresponding field value in a profile risk record in the data store of profiles." Mulholland does not teach a system including *a risk processor* that updates risk information including *subjective or quantitative risk information* (and note that *subjective risk information is still quantitative*, as explained above, it is just not expressly numerical, i.e. it uses words that mapped to number, such as "average" for 50%) based on risk information in a particular project. Although the rejection itself does no so allege but instead refers only to Mulholland's HyperCard system, in response to applicant's arguments pointing the Examiner has argued that a PC executing the Hypercard and

Excel is such a risk processor, "since said processor is used to process risk data." The Examiner argues that the disclosed sensitivity analysis (per Excel) varies "one certain element at a time, thereby updating the body of risk information for a particular project using a risk processor." Applicant respectfully points out that the claims require more than simply "processing" numbers having to do with risk. The claims require updating *subjective or quantitative risk information based on risk information* in a particular project, i.e. based on a "profile" risk record. As noted above, in a sensitivity analysis, the variation of one parameter at a time is done to see what outcome results, e.g. how much more does the project cost, or how much longer does it take. It is therefore distinguished from the updating recited in claim 1 in two respects: 1) it is purely hypothetical, i.e. it is a "what if" question, and so is not based on risk information in a particular project; and (relatedly) 2) it is not an "updating" but is instead a "variation" of a hypothetical value, in order to see the effect.

The invention as in claims 1 and 11 is not inconsistent with classic risk analysis, i.e. it can be used in a methodology that uses classic risk analysis. But what it provides that is *new* a head start in modeling risk: it allows using a risk value in a generic risk record as the starting point in a new project, where the risk value in the generic risk record is the result of the recited updating, which over time takes into account experiences in many different actual projects, and so ought to be a quite good starting point after a while.

This head start provides an enormous advantage compared to Mulholland (or classic risk analysis generally). *Without the invention*, after a risk engineer identifies a risk, the risk engineer must then decide on what if any risk mitigation controls to adopt. The risk mitigation controls (the corrective and/or preventive controls illustrated in Figure 1A) of course affect the actual value of the risk. So the risk engineer must guess at the

probability of a bad thing happening for each possible risk mitigation control. In effect, the risk engineer has two degrees of freedom in guessing at a value for risk to use. That is a lot of room for error. The overall project completion date predicted by the risk engineer could easily be off by so high an error as to cause financial ruin. *With the invention*, if the generic knowledge base has been in use long enough, the risks for each identifiable risk and for a given risk mitigation control(s) should be reasonably well known, so that all the guessing is largely eliminated.

No averaging

For the averaging recited in claims 1 and 11, the Examiner relies on *Official Notice*. Applicant respectfully submits that it is not consistent for the Examiner to assert on the one hand that Mulholland teaches the invention except in respect to the averaging, and then assert that the averaging is, by Official notice, of no patentable weight. Surely if Mulholland actually disclosed the invention there would be some indication of some kind of averaging as recited in the claims. But as applicant has pointed out, Mulholland, which does not even teach two data stores (one for specific projects and one for the templates) cannot fairly be said to teach or suggest the updating of a generic risk record (a template record) using a corresponding profile risk record (a specific project record) as recited in the claims (but instead teaches only using Excel for "what if" scenarios), irrespective of whether "averaging" is used in the updating, which is why there is nothing the Examiner can point to in Mulholland as teaching or suggesting the recited averaging. If Mulholland really does teach the invention except for the averaging, then Mulholland would surely have *something* the Examiner could point to as suggesting the averaging, since averaging of some sort lies at the heart of the invention and would therefore be at least

suggested by Mulholland if in fact Mulholland teaches the invention.

Applicant therefore respectfully submits that all the rejections relying on Mulholland are error.

The Official Notice is Improper and/or must be withdrawn

But further in regard to the Official Notice taken by the Examiner in order to reject claims 1 and 11, asserting that "it is old and well known in the art to update/ modify data based on newly gathered inputs (i.e. recalculating an average of data values after receiving additional data)":

Such Official Notice was taken for the first time in the most recent final Office action. Applicant challenged the Official Notice, and then asked the Examiner to provide actual prior art teaching two data stores, one holding data for particular projects, and one holding an average of such data, as minimally required by claims 1 and 11.

In the Advisory Action, the Examiner asserts that applicant has not met the minimum requirements for a challenge to Official Notice, which are (according to the Advisory Action):

(a) In general, a challenge, to be proper, must contain adequate information or arguments so that on its face it creates a reasonable doubt regarding the circumstances justifying the Official Notice

(b) Applicants must seasonably traverse (challenge) the taking of Official Notice as soon as practicable, meaning the next response following an Office Action. If an applicant fails to seasonably traverse the Official Notice during examination, his right to challenge the Official Notice is waited.

Applicant now asserts that:

a) applicant did too seasonably and properly challenge the taking of Official Notice, and because the Examiner did not then provide documentary evidence, the Official Notice must be withdrawn, and so all the rejections are error; and

b) the taking of Official Notice was error to begin with.

a) Applicant did seasonably and properly challenge the taking of Official Notice

In response to the final Office action, which is where the Official Notice was asserted for the first time, applicant provided adequate information or arguments so that on its face it creates a reasonable doubt regarding the circumstances justifying the Official Notice. Beginning at page 11, applicant challenged the Official Notice arguing as follows:

> Applicant respectfully submits that it is _not consistent_ for the Examiner to assert on the one hand that Mulholland teaches the invention except in respect to the averaging, and then assert that the averaging is, by Official notice, of no patentable weight. Surely if Mulholland actually disclosed the invention there would be _some indication of some kind of averaging_ as recited in the claims. [Emphasis added.]

In other words, applicant argued that even if averaging *per se* is not disclosed by Mulholland but in fact Mulholland could be said to otherwise teach the invention, there would be disclosed in Mulholland at least some kind of updating, which the Examiner might then assert includes averaging. But Mulholland nowhere teaches anything like the updating, now more distinctly recited as using an averaging process, to update average historical risk records based on new risk records of actual projects. Applicant respectfully submits that this absent teaching or suggestion is the required adequate information or arguments so that on its face it creates a reasonable doubt regarding the circumstances justifying the Official Notice.

But applicant then continued the challenge, providing substantial further argument that the recited averaging was not "common knowledge." In particular, applicant argued that the averaging is now recited in the claims in order to clarify the "updating" also recited in the claims, since the Examiner had construed "updating" to be any data processing in respect to risk. Applicant explained in the response to the most recent final Office action that:

> ... applicant is not relying on "just averaging" to distinguish from Mulholland. Applicant had argued that

Mulholland cannot fairly be said to teach the invention according to a fair reading of the claims without the averaging limitation, and amended the claims to recite same only in order to confine the Office in its claim construction to subject matter applicant actually regards as the invention.

Applicant had argued that, irrespective of the averaging, Mulholland does not teach a system including *a risk processor* that updates a body of risk information including *quantitative risk information* based on risk information in a particular project. In response the Examiner argues that a PC executing the Hypercard and Excel are such a risk processor, "since said processor is used to process risk data." The Examiner argues that the disclosed sensitivity analysis varies "one certain element at a time, thereby updating the body of risk information for a particular project using a risk processor." Applicant respectfully points out that the claim requires that the alleged "updating" relied on, i.e. the variation of one parameter at a time in order to perform a sensitivity analysis, can in no way be equated to updating a body of risk information including *quantitative risk information* based on risk information in a particular project. In a sensitivity analysis, the variation of one parameter at a time is done to see what outcome results, e.g. how much more does the project cost, or how much longer does it take. It is therefore distinguished from the updating recited in claim 1 in two respects: 1) it is purely hypothetical, i.e. it is a "what if" question, and so is not based on risk information in a particular project; and 2) it is for a particular project, not a body of risk information, and so cannot be said to result in the updating of a *body of risk* information, as required by the invention as claimed, let alone the averaging required by all the claims of the application.

Applicant respectfully submits that applicant has clearly met any possible burden applicant may have had to require the Office to provide the instant and unquestionable demonstration that the *recited* averaging (i.e. averaging into at least one value of a generic risk record (a template record) a corresponding field value in a profile risk record (a recent project record) is "common knowledge."

The MPEP, in setting out what is required to properly traverse the taking of Official Action refers only to 37 CFR 1.111(b), and based on the rules there, provide that:

> A general allegation that the claims define a patentable
> invention without any reference to the examiner's
> assertion of official notice would be inadequate.

Applicant respectfully submits that the argument made by applicant
as to the inconsistency of the Examiner's rejections because of
not being able to show where in Mulholland the recited averaging
might be suggested, is _far and away more than a general allegation_
that the claims define a patentable invention without any
reference to the examiner's assertion of official notice would be
inadequate.

Applicant now even further argues as follows. Applicant
concedes that "recalculating an average of data values after
receiving additional data," is well known, broadly speaking. But
as virtually all inventions are a combination of known elements,
almost any element is assailable by Official Notice if the
Examiner is entitled to consider the element in broad
generalities, out of the particular context in which it occurs in
the invention. In the present case, the claims require not merely
the "recalculating" of the Official Notice, but averaging into an
already existing value of a "generic" risk record (a template
record) a corresponding field value in a "profile" risk record (a
record for a particular actual project). The recited averaging
allows the value held in the generic risk record to be refined
over time to reflect lessons learned in actual projects. The
generic risk record is held in what in the claims is called a
knowledge base, and because of updating values in the knowledge
base using the recited averaging, the knowledge base learns over
time. The records held in the knowledge base can then be used as
starting points for records for new projects.

The MPEP at 2144.03 provides:

> If applicant adequately traverses the examiner's
> assertion of official notice, the examiner _must provide_
> _documentary evidence in the next Office action_ if the
> rejection is to be maintained. See 37 CFR 1.104(c)(2).

Since applicant has seasonably and properly challenged, the Examiner has erred in maintaining the Official Notice without providing evidence that the recited averaging is indeed "old," and so the Official Notice must be withdrawn.

   b) The taking of Official Notice was error to begin with

   Applicant further argues that the taking of the Official Notice was error to begin with. This is because, for one thing, the Examiner relies on the Official Notice as the principal evidence upon which the rejection is based. The MPEP at 2144.03 provides:

> It is never appropriate to rely solely on "common knowledge"
> in the art without evidentiary support in the record, as the
> principal evidence upon which a rejection was based.

Without the Official Notice that the recited "averaging" is "old and well known in the art," all claims would be found allowable. The "averaging" was added to the claims to more distinctly claim the previously recited "updating," which the Office asserted could be interpreted as in essence any data processing of risk information *whatsoever* (as e.g. in performing the "what if" calculations using the Excel spreadsheet).

   For another thing, the Official notice is taken for the first time in a final Office action. 2144.03 also provides:

> Official notice without documentary evidence to support
> an examiner's conclusion is permissible only in some
> circumstances. While "official notice" may be relied on,
> these circumstances should be rare when an application
> is *under final rejection* or action under 37 CFR 1.113.

   Finally, the recited averaging is not capable of instant and unquestionable demonstration as being well known *and* the Official Notice is asserted for the first time in a final Office action. The MPEP at 2144.03 also provides:

> Official notice unsupported by documentary evidence
> should only be taken by the examiner where the facts
> asserted to be well-known, or to be common knowledge in
> the art are capable of *instant and unquestionable*
> *demonstration* as being well-known.   [Emphasis added.]

When applicant challenged the Official Notice (as described below), instead of the Examiner simply providing the instant and unquestionable demonstration, the Examiner argues that applicant has not met his burden in traversing the taking of Official Notice. But if the Official Notice were proper to being with, it would be a small matter for the Examiner to provide the instant and unquestionable demonstration. Applicant suggests that the Examiner's not having done so, and instead choosing to argue that an improper traversal was made, is persuasive evidence that instant and unquestionable demonstration cannot in fact be made.

Corollaries of the Preceding Arguments

For all of the aforementioned reasons, and in view of the dependencies of the claims not argued, it is respectfully submitted that all the rejections are error, and the rejections should be reversed.

Respectfully submitted,

April 30, 2007 _____   _____
Date   James A. Retter
                                  Registration No. 41,266

WARE, FRESSOLA, VAN DER SLUYS
 & ADOLPHSON LLP   tel: (203) 261-1234
755 Main Street, P.O. Box 224   Cust. No.: 004955
Monroe, CT 06468-0224

VIII. CLAIMS APPENDIX

The following are the claims involved in the appeal.

1. (Previously presented) A system, comprising:

a) a knowledge base, for maintaining a generic risk record including a plurality of fields at least some of which have subjective or quantitative values for risk, with the subjective values synchronized to numerical values, and at least some of which have been determined as an average of corresponding subjective or quantitative risk values in completed projects or processes;

b) a data store of profiles, for maintaining a profile risk record associated with a particular profile for a particular project or process, and including the same plurality of fields as the generic risk record, the profile risk record for use in providing a risk assessment in the associated profile for the particular project or process; and

c) a risk processor, for updating at least one of the subjective or quantitative values of the generic risk record based on a corresponding field value in the profile risk record in the data store of profiles, by averaging into the at least one value of the generic risk record the corresponding field value in the profile risk record;

whereby at least some of the subjective or quantitative values of the generic risk record are refined over time based on values of the corresponding fields of the profile risk record for the particular project or process.

2. (Previously presented) The system of claim 1, wherein some of the subjective or quantitative values are values of measuring fields input by the user, and others are values of calculated fields calculated by the system, and the system allows different modes of analysis in which the fields that are the measuring

-24-

fields differ.

3.   (Original) The system of claim 2, wherein the modes of analysis include:

a residual assessment mode, in which a user selects inherent values of likelihood and consequence for a risk, and a value, for each control for the risk, for effectiveness in either preventing the risk or reducing the consequence of the risk, and the system then calculates residual levels of likelihood, consequence and risk rating for the risk;

an inherent assessment mode, in which a user selects residual values of likelihood and consequence for a risk, and a value, for each control for the risk, for effectiveness in either preventing the risk or in reducing the consequence of the risk, and the system then calculates the inherent levels of likelihood, consequence and risk rating for the risk; and

a controls self-assessment mode, in which a user selects inherent values of likelihood and consequence for a risk, as well as residual values of likelihood and consequence for the risk, and the system then calculates the effectiveness of predetermined controls needed to either prevent the risk or to reduce the consequence of the risk.

4.   (Previously presented) The system of claim 1, wherein the system can be used in different modes of use, and further wherein only some of the fields of the generic risk record or the profile risk record are required to be used in a risk management analysis, and which of the fields are required depends on the mode of use.

5.   (Previously presented) The system of claim 4, wherein both the generic risk record and the profile risk record each comprise:

a) a risk component, for indicating a risk, for indicating an inherent risk rating, and also for indicating a residual risk rating;

b) a cause component, for indicating the cause of the risk;

c) a consequence component, for indicating a particular consequence of the risk and an inherent and a residual cost of the particular consequence; and

d) a control component, for indicating a control, for indicating whether the control is corrective or preventive, and for indicating the effectiveness of the control.

6. (Previously presented) The system of claim 5, wherein in one mode of use an inherent risk impact cost is aggregated over the inherent cost of each consequence of the risk.

7. (Previously presented) The system of claim 5, wherein in one mode of use the residual likelihood is an aggregate calculation based on the effectiveness of each preventive control acting on an inherent likelihood.

8. (Previously presented) The system of claim 5, wherein in one mode of use a residual risk impact cost is aggregated over the residual cost of each consequence of the risk.

9. (Original) The system of claim 1, further comprising a scripting facility for enabling a user to create a script directing how a risk management process is to be performed, the script indicating steps that can be used in performing risk analysis in any profile.

10. (Previously presented) The system of claim 1, further wherein the risk processor also uses the generic risk record to provide initial values for the profile risk record, whereby the profile risk record has initial values based on experience gained over

time.

11.   (Previously presented) A method, comprising:

a) a step of maintaining in a knowledge base a generic risk record including a plurality of fields at least some of which have subjective or quantitative values for risk, with the subjective values synchronized to numerical values, and at least some of which have been determined as an average of corresponding subjective or quantitative risk values in completed projects or processes;

b) a step of maintaining in a data store of profiles a profile risk record associated with a particular profile for a particular project or process, and including the same plurality of fields as the generic risk record, the profile risk record for use in providing a risk assessment in the associated profile for the particular project or process; and

c) a step of updating at least one of the subjective or quantitative values of the generic risk record based on a corresponding field value in the profile risk record in the data store of profiles, by averaging into the at least one value of the generic risk record the corresponding field value in the profile risk record;

whereby at least some of the subjective or quantitative values of the generic risk record are refined over time based on values of the corresponding fields of the profile risk record for the particular project or process.

12.   (Previously presented) The method of claim 11, wherein some of the subjective or quantitative values are values of measuring fields input by the user, and others are values of calculated fields calculated by the system, and the method allows different modes of analysis in which the fields that are the measuring fields differ.

13.   (Previously presented) The method of claim 12, wherein the modes of analysis include:

a residual assessment mode, in which a user selects inherent values of likelihood and consequence for a risk, and a value, for each control for the risk, for effectiveness in either preventing the risk or reducing the consequence of the risk, and the method then calculates residual levels of likelihood, consequence and risk rating for the risk;

an inherent assessment mode, in which a user selects residual values of likelihood and consequence for a risk, and a value, for each control for the risk, for effectiveness in either preventing the risk or in reducing the consequence of the risk, and the method then calculates the inherent levels of likelihood, consequence and risk rating for the risk; and

a controls self-assessment mode, in which a user selects inherent values of likelihood and consequence for a risk, as well as residual values of likelihood and consequence for the risk, and the method then calculates the effectiveness of predetermined controls needed to either prevent the risk or to reduce the consequence of the risk.

14.   (Previously presented) The method of claim 11, wherein the method can be used in different modes of use, and further wherein only some of the fields of the generic risk record or the profile risk record are required to be used in a risk management analysis, and which of the fields are required depends on the mode of use.

15.   (Previously presented) The method of claim 14, wherein both the generic risk record and the profile risk record each comprise:

a) a risk component, for indicating a risk, for indicating an inherent risk rating, and also for indicating a residual risk rating;

b) a cause component, for indicating the cause of the risk;

c) a consequence component, for indicating a particular consequence of the risk and an inherent and a residual cost of the particular consequence; and

d) a control component, for indicating a control, for indicating whether the control is corrective or preventive, and for indicating the effectiveness of the control.

16. (Previously presented) The method of claim 15, wherein in one mode of use an inherent risk impact cost is aggregated over the inherent cost of each consequence of the risk.

17. (Previously presented) The method of claim 15, wherein in one mode of use the residual likelihood is an aggregate calculation based on the effectiveness of each preventive control acting on an inherent likelihood.

18. (Previously presented) The method of claim 15, wherein in one mode of use a residual risk impact cost is aggregated over the residual cost of each consequence of the risk.

19. (Previously presented) The method of claim 11, further comprising a step of using a scripting facility to enable a user to create a script directing how a risk management process is to be performed, the script indicating steps that can be used in performing risk analysis in any profile.

20. (Previously presented) The method of claim 11, further wherein the risk processor also uses the generic risk record to provide initial values for the profile risk record, whereby the profile risk record has initial values based on experience gained over time.

IX. EVIDENCE APPENDIX

No evidence has been submitted under Rules 1.130, 1.131, or 1.132 and relied on by appellant in the appeal, nor is there any other evidence entered by the examiner and relied up on by appellant in the appeal.

X. RELATED PROCEDINGS APPENDIX

There are no and have been no related proceedings before a court or the Board, and so there are no corresponding decisions rendered by a court or the Board in any related proceeding. The only related matter is a corresponding international application, PCT/AU02/00094, filed 31 Jan. 2002. In the international application, where the US PTO was used as the International Preliminary Examining Authority, all claims were found to meet all the requirements of patentability. Despite this, applicant did not enter national stage anywhere, due to a lack of funds at the time.